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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/640,710 08/18/00 STRINGAM

B REC-6201

MM91/0913

E PHILIP KOLTOS
DIVISION OF GENERAL LAW - OFFICE OF THE
DEPARTMENT OF THE INTERIOR
1849 C STREET NW ROOM 6351
WASHINGTON DC 20240

EXAMINER

MARTIR, L

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2855

DATE MAILED:

09/13/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | |
|------------------------------|-----------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/640,710 | STRINGAM ET AL. |
| | Examiner Lilybett Martir | Art Unit 2855 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on ____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-12 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) 1-12 is/are rejected.
 7) Claim(s) ____ is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 18 August 2000 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 11) The proposed drawing correction filed on ____ is: a) approved b) disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) The translation of the foreign language provisional application has been received.
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: A brief description of Figure 4 is not provided.

Appropriate correction is required.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:
20. Correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito (Pat. 5,926,438). Saito teaches the claimed invention, including:

- A sensor for determining as in element 44, using a measurement structure in the open channel, the pressure head of water flowing in the open channel and for producing a corresponding output signal; a central processing unit as in element 10 for receiving said output signal from said sensor, for calculating total water flow in the channel based on said output signal and for producing a total flow signal based on the calculated total water flow; a display device as in element 2 for receiving said total flow signal from said central processing

unit and for displaying total flow based thereon; and a single housing as in element 1 for housing said sensor, said central processing unit, and said display device, as in claim 1.

- An ultrasonic sensor as in element 50 and said measurement structure comprising a weir or flume as inherently disclosed on Col. 3, lines 42-43, as in claim 2.
- A liquid crystal display device as in element 2, as in claim 3.
- A housing that comprises a top portion and a bottom portion mechanically connected to the top portion as formed by elements 1 and 41, as in claim 4.
- A downwardly depending member as in element 44 connected to said bottom portion of said housing, and wherein a sensor is received in said member, as in claim 5.
- Regarding claims 6-8, said claims deal with the way in which data is manipulated and calculations are made exist as an essential constituent of the claimed invention, therefore are said to be inherently disclosed in the teachings of Saito.
- Regarding claims 9-12, said claims deal with the method of using the claimed device and exist as an essential constituent of the claimed invention, therefore those claims are said to be inherently disclosed in the teachings of Saito.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amano (Pat. 5,437,634) in view of Brackett et al. (Pat. 5,333,498). Amano teaches the claimed invention, including:

- A sensor for determining as in element 6, using a measurement structure in the open channel, the pressure head of water flowing in the open channel and for producing a corresponding output signal; a central processing unit as in element 40 for receiving said output signal from said sensor, for calculating total water flow in the channel based on said output signal and for producing a total flow signal based on the calculated total water flow; a display device as in element 25 for receiving said total flow signal from said central processing unit and for displaying total flow based thereon, as in claim 1.
- An ultrasonic sensor as in element 6 (Col. 7, lines 14-15), as in claim 2.
- A liquid crystal display device as in element 23, as in claim 3.

But he does not disclose:

- A single housing for housing said sensor, said central processing unit, and said display device, as in claim 1.
- Said measurement structure comprising a weir or flume as in claim 2.
- A housing that comprises a top portion and a bottom portion mechanically connected to the top portion, as in claim 4.

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- A downwardly depending member as in element 64 connected to said bottom portion of said housing, and wherein a sensor is received in said member, as in claim 5.

Brackett et al. teaches a fluid measuring device as in element 34 that is composed by a housing as in element 20 that houses the sensors as in elements 66,54 and 32 and a display device as in element 58, the measuring structure comprising a weir or flume as in element 30, a housing that is composed by a top and a bottom portion as noted in Figure 2 with a depending member where the sensor is received at as in element 30.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the device of Amano using the teachings of Brackett et al. by providing a housing composed by two portions, a measuring channel in which the measurements are to be done and a depending member that receives the sensors for the purpose of protecting the device from environmental events, limiting the path of the flow to be measured and providing means to hold the sensors in place in order to be able to perform the desired flow measurements.

Citation of Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art considered pertinent during examination of the examined application is:

- Kolling (Pat. 5,726,358) Method and device for measuring the discharge in partly filled or completely filled ducts and in open channels.
- Cato et al. (Pat. 5,442,343) Ultrasonic shelf label method and apparatus.

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- Strickler et al. (Pat. 4,523,460) Fluid measuring, testing and accounting system.
- Frawley, Jr. (Pat. 5,024,084) Flow meter for liquid doctored through fourdrinier fabric at wet end of fourdrinier paper machine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilybett Martir whose telephone number is (703)305-6900. The examiner can normally be reached on 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on (703)308-0079. The fax phone numbers for the organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Lilybett Martir
Lilybett Martir
Examiner
Art Unit 2855

LBM
September 7, 2001

BF
Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800